

BOOK REVIEW

Guide to the Trees, Shrubs, and Woody Vines of Tennessee by B. Eugene Wofford and Edward W. Chester. 2002. x + 190 pp. illus., 380 color plates. ISBN 1-57233-205-0 \$29.95 (soft cover). University of Tennessee Press, Knoxville, TN.

The *Guide to the Trees, Shrubs, and Woody Vines of Tennessee* is an important new publication to consult or add to your personal library if you are interested in the flora of the southeastern United States or Tennessee, in particular. Coauthors Eugene Wofford and Wayne Chester have created a major update to previous works dealing with woody plants in the botanically diverse state of Tennessee. For decades students of dendrology in Tennessee have relied on an excellent primer, the *Summer Key to Tennessee Trees* by Shanks and Sharp (1950), now in its 9th unedited printing, and a number of more technical and popular treatments covering broader regions or adjacent states. With this new publication, students of the Tennessee flora will have a handy tool for identifying nearly any woody plant in the state. The only other reference that comes close to filling this niche is *Trees, Shrubs, and Woody Vines of Great Smoky Mountains National Park* by Stupka (1964), another University of Tennessee Press publication which oddly was omitted from an otherwise excellent set of references cited. Although it is not intended to be an exhaustive bibliography, the reference section provides many useful citations for those wanting to dig a little deeper into the flora of the state and region.

Within Tennessee, according to the authors, there are 358 native woody species and infraspecific taxa occurring in one or more of the state's nine major physiographic regions, which stretch from the Unaka Mountains in the east to the Mississippi Valley in the west. Also treated in the book are 45 non-native taxa that have become naturalized. To cover 403 taxa in this compact book, the authors have kept description to a minimum, instead relying on well-written and tested dichotomous keys and plates to help the user get to the correct identification. The 95 plates at the back of the book represent a new approach for books of this type. Instead of using color photographs taken in the field as done by Foote and Jones (1989) or Hunter (1989), or line drawings as done by Viereck and Little (1972), each plate typically presents four separate photographs of herbarium specimens, each depicting a different taxon. While these photographs lack the vitality and brilliance of photographs taken outdoors, the two-dimensional aspect of the pressed material, the

authors argue, allows for more diagnostic features to be viewed. In many cases, the carefully chosen specimens, often with diagnostic flowers or fruit material alongside vegetative material, make this work very well. Both sides of flattened leaves are often shown. This presentation does a nice job of illustrating color differences, pubescent surfaces, leaf margin details, and other features not always captured in a single field photo. Occasionally, the authors have added a photomicrograph as an inset to depict a diagnostic feature such as the peltate scales of *Rhododendron minus* or the resin dots of *Gaylussacia baccata*.

Because the images were chosen to show key aspects of each species, they should be useful aids in identification. On occasion, the photo depicting a species will consist of no more than a close-up of a leaf base or margin, but these features were selected to help distinguish the species from related taxa. Drawbacks with the plates include occasional loss of color or details in the specimens, or the omission of a particularly useful characteristic that could have been included. Examples are the poor color on flowers of *Rhododendron periclymenoides*, the lack of flowers or fruit on the specimen of *Berberis thunbergii*, the lack of glandular hairs on the twigs and petioles in the image of *Corylus americana*, or the failure to show the underside of a black cherry (*Prunus serotina*) leaf revealing the diagnostic mustache of rusty hairs along the midrib. The keys and plates will work well in all seasons except winter. Many of the fine details of twigs and fruit characteristics useful in winter are not visible in the plates and are better shown in texts with line drawings or black and white photographs.

A few of the plants treated in this book will surprise some readers; the authors were inclusive when defining a shrub as "a low, woody plant with one to many slender trunks." *Phoradendron leucarpum*, the mistletoe, is described as a "hemiparasitic shrub;" *Opuntia humifusa* is included because of its "evergreen stems;" *Solanum dulcamara* is "suffrutescent;" *Polygonella americana* is called a "subshrub;" and *Chimaphila maculata* is a "nearly herbaceous, evergreen subshrub." More obvious choices for small shrubs, included in the book because of their multiple stems and woody bases, are the diminutive *Conradina verticillata* and *Paxistima canbyi*, both rare species in the state. Conversely, some of the non-native species omitted from the book might surprise readers. An appendix of omitted taxa listing 54 "cultivated and/or persisting taxa represented by collections" includes a few taxa often listed as invasive in other parts of the eastern United States (e.g., *Acer platanoides*, *Lonicera morrowii*, *Rhamnus cathartica*, and *R. frangula*). These examples, and perhaps others, should have been

given more consideration for inclusion if they have naturalized in one or more places in the state.

The book serves as more than a woody plant identification tool. The 21-page introduction and the appendices summarize some interesting facts about the state that chose the Tulip Poplar, *Liriodendron tulipifera*, a member of the Magnolia family, as its official state tree. One can learn, for instance, that Tulip Poplar is one of seven members of the Magnolia family that are native to Tennessee. One can also learn that *Vaccinium pallidum* produces what the authors regard as the tastiest of Tennessee's blueberries, whereas *V. stamineum* has berries that are scarcely edible. Using summary tables, it is easy to compare the woody floras of the nine physiographic provinces. One table gives the distribution of each species by province. An interesting fact revealed is that the Cumberland Plateau exceeds the Unaka Mountain province in richness by one genus and 10 species. Analysis of the tabulations in another table shows that there are 12 genera present in the Cumberland Plateau but absent from the Unakas, and conversely there are another 12 genera present in the Unakas that are not represented in the Cumberland Plateau flora. Readers will also appreciate the inclusion of information about which species are considered rare by state and federal authorities (55 taxa), as well as the special discussion of five species considered to be extirpated.

The authors' decades of experience studying the Tennessee flora show in this book. Taxonomy and nomenclature follow closely that provided in a state checklist (Wofford and Kral 1993) and two state atlas volumes (Chester et al. 1993, 1997). In some cases, however, names for certain families have been updated to follow newer treatments (e.g., Flora of North America Editorial Committee 1993, 1997; Luteyn et al. 1996). As a specific example, Box-huckleberry, a Cumberland Plateau endemic, is now called *Buxella brachycera* (Michx.) Small instead of *Gaylussacia brachycera* (Michx.) A. Gray (which, incidentally, is shown in synonymy as *G. brachycera* A. Gray, an error in the text). In defense of the work, however, it is extremely free of such errors and typos. Species are presented alphabetically by scientific name, but are indexed by both common and scientific names, making it very easy to use. A minor flaw to the layout, in my opinion, is that the alphabetic arrangement of the genera is not immediately apparent because the genera appear on the right side of the page opposite the non-alphabetic family names on the left. A nice design feature is that many terms defined in the brief glossary are keyed to particular photographs in the text. Overall it is a thoughtfully put together, up-to-date treatment that

will help many people to better understand the diverse woody flora of Tennessee.

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